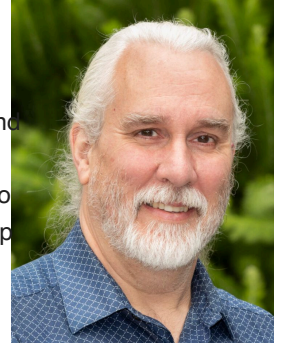


FLEET News: June 2024

It was heartwarming to see the huge turnout for our FLEET Landing event in May. It brought home in a tangible way that one of our biggest accomplishments as a Centre has been establishing a strong and lasting community of researchers. If you couldn't be part of the Landing event, see below for videos of the talks and the live graphic visualization made during the event. And also see below for more ways to stay in touch and stay part of the FLEET family: Make sure to join the Friends of FLEET LinkedIn group (now over 100 members!) and check out the upcoming conferences and workshops for opportunities to catch up in person.



This isn't quite the last newsletter yet, we expect to contact you again when FLEET's final report is ready!

Regards,

Michael Fuhrer
Director, FLEET

In this edition of FLEET News:

- [FLEET Landing videos](#)
- [FLEET Legacy website](#)
- [Friends of FLEET](#)
- [Upcoming Events](#)
- [The US-Australia/EU 'Transpacific' Colloquium series](#)
- [Ultra-high spectral purity revealed in exciton-polariton laser \(ANU\)](#)
- [Dark excitons shed new light on polaritons \(Monash\)](#)
- [ECR authors this month](#)
- [Catch up on talks online](#)

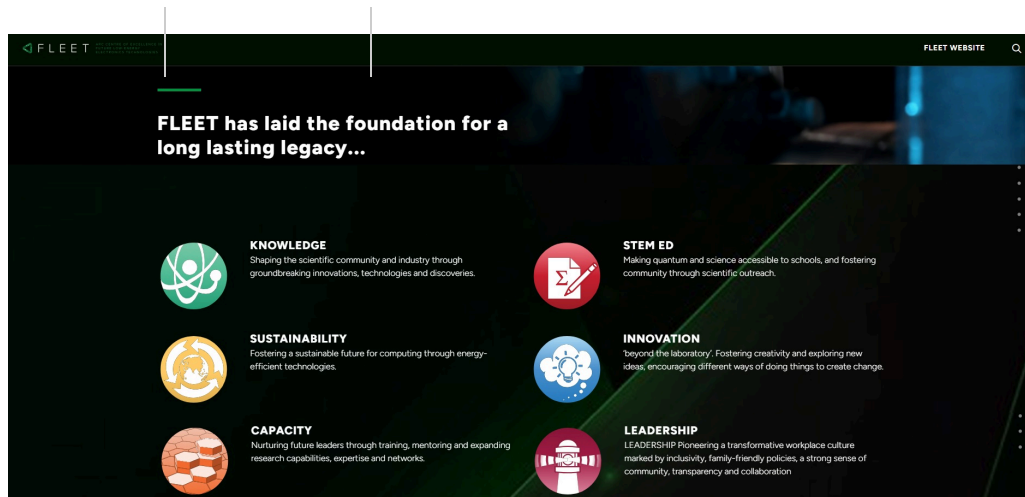
FLEET Landing celebrates Centre achievements

If you missed the Landing event... [Read more about the event, watch the talks on YouTube, and see the live-graphics visualisation, here.](#)



Legacy site

At the completion of the FLEET Landing event, Prof Batstone launched the FLEET Legacy website, which will be the repository of FLEET impact stories moving forward. A handful of case studies feature on the site already and more will appear in the next months. Any feedback on the site would be keenly appreciated by Errol and Tich-Lam. [See **Legacy.FLEET.org.au**](https://www.legacy.fleet.org.au)



Staying in touch: Friends of FLEET

Join the **Friends of FLEET** LinkedIn group to stay connected!

Staying in touch: upcoming conferences

There are a few opportunities for FLEET people to catch up in the next few months:

FINESS

AIP 2024 Congress

QLIME

AMN

The US-Australia/EU 'Transpacific' Colloquium series

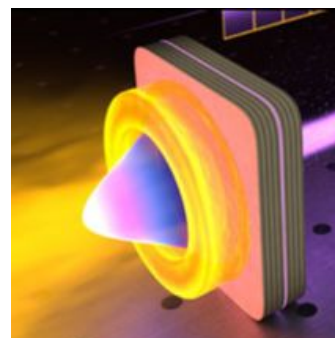
The schedule for the colloquium supported by FLEET in the next few months:

- **Katrina J. Franke**, Freie Universität Berlin – 24 July, 3PM (AEST), 7AM (CEST)
- **Pavel Jelinek**, Institute of Physics, Czech Academy of Sciences – 28 August, 3PM (AEST), 7AM (CEST)
- **Prineha Narang** UCLA – 25 Sept, 10AM (AEDT), 5PM (PDT), 8PM (EDT)
- **Jiadong Zang** University of New Hampshire – 23 Oct., 10AM (AEDT), 7PM (EDT)

More information on "The US-Australia/EU 'Transpacific' Colloquium series" can be found [here](#).

Ultra-high spectral purity revealed in exciton-polariton laser

ANU research reveals the high spectral purity (ie, ultra-narrow linewidth) of a novel exciton-polariton laser, with promise for practical low-energy applications. 'Snapshot' interferometer linewidth measure, which avoided time-averaging limitations and offered unprecedented levels of detail obscured in previous measurements, revealed an ultra-narrow linewidth ten times finer than previously published results. [Read more online](#).



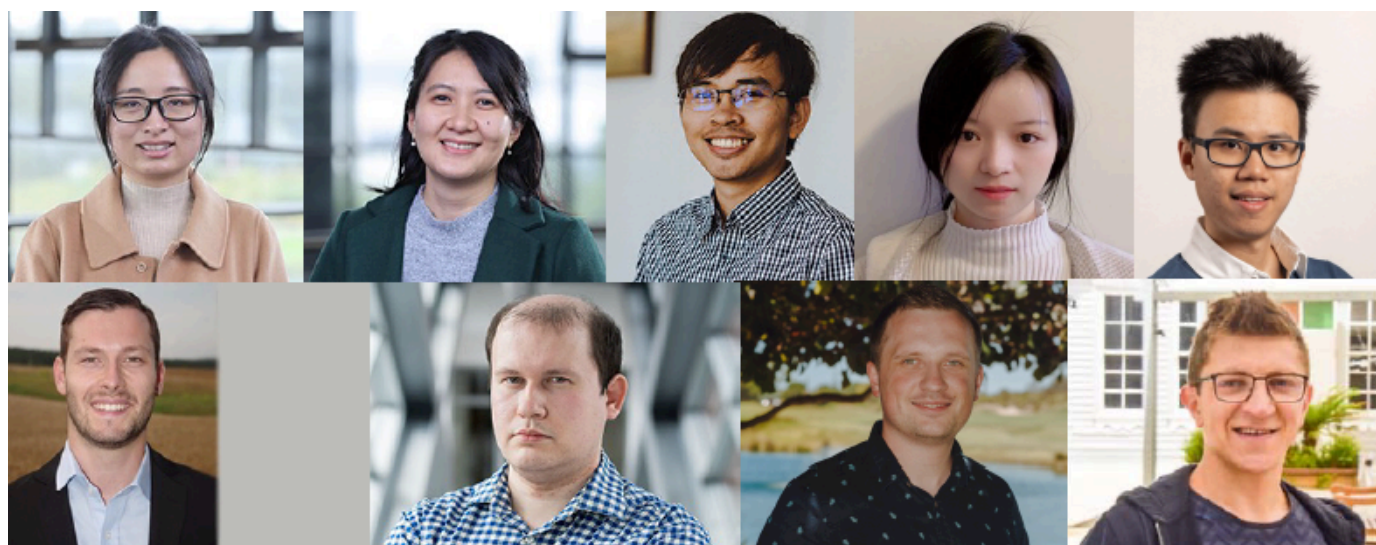
Dark excitons shed new light on polaritons

A team of Monash researchers have uncovered for the first time the full effects of interactions between exciton-polaritons and their associated dark excitonic reservoir. As hybrid mixtures of light and matter, controllable, superfluid polaritons have potential behaviour of the polaritons. [Read more](#).



Authors in June

Congratulations to our early-career researchers who were authors of papers published this month: Bao Yue Zhang, Bianca Rae Fabricante, Eliezer Estrecho, Ha Van Nam, Jinling Zhou, Kenneth Choo, Matthias Wurdack, Mateusz Krol, Maciej Pieczarka and Olivier Bleu.



Finite temperature non-equilibrium superfluid workshop, September

Surfers 1–5 September 2024: Finite-temperature non-equilibrium superfluid systems FINESS2024 will bring together theoretical and experimental expertise at the forefront of research in degenerate ultra-cold matter, polariton-exciton condensates, and strongly-correlated and open quantum systems. Co-sponsored by FLEET and EQUUS at Surfers on the Gold Coast. [Details online](#). Submissions from people of all career stages (including PhD students) are encouraged.

AIP / opto-microelectronics conference, December

Melbourne 2–6 December 2024: The Australian Institute of Physics Congress, co-located with the Conference on Optoelectronic and Microelectronic Materials and Devices (COMMAD), will be held at the Melbourne Convention Centre. See [AIP-congress.org.au](https://aip-congress.org.au) for further details.

The AIP Congress will feature a FLEET dinner. Contact Jeff Davis and Kirrily Rule for details.



First Australian workshop on quantum light information, matter and electronics (QLIME), December

Melbourne 8–12 December 2024: QLIME will connect leading Australian and International researchers in the fields of quantum light, information, matter, and electronics to foster collaboration and identify new opportunities in these interrelated fields. The first in a new biannual series to be held in Australia.

Advanced Materials & Nanotechnology, February



Christchurch NZ 9–13 February 2025: The Conference on Advanced Materials and Nanotechnology (AMN11) will cover a broad variety of topics in nanotechnology and materials science, bringing together material scientists, chemists, physicists, biologists and engineers. **Registration is open now.**

Catch up on past talks

All FLEET seminars and talks are available to catch up on YouTube (also linked on the FLEET intranet Presentations page):

- Ilya Eremin (Ruhr-Universität Bochum) **'Magnetic' mechanisms of unconventional superconductivity: entering the Ni-age**
- Susan Coppersmith (UNSW) **Optimising silicon/silicon-germanium quantum dot qubits**
- Oleg Yazyev (École Polytechnique Fédérale de Lausanne) **In-silico discovery of novel topological materials**
- Shu Ping Lau (Hong Kong Polytechnic) **Ferroelectricity in 2D heterobilayers**
- Michele Governale (MacDiarmid) **Corner states in 2D topological insulators**

Live Centre stats

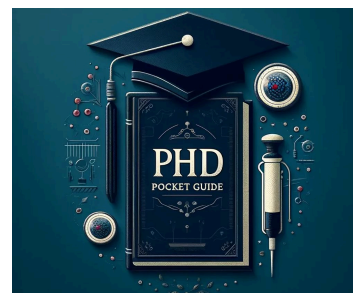
Ever wondered how many people have been in FLEET, how many ARC Laureates, Future or DECRA Fellows, collaborative publications or citations? All these stats and more are updated at [FLEET.org.au/statistics](https://fleet.org.au/statistics)



Mitch's guide for PhD students

In a series of 'PhD Pocket Guide' chapters, FLEET alum Mitch Conway shares some of the skills and strategies, tricks and tactics he learned during his own PhD journey, which could be helpful for others on that journey. Episodes so far:

- How to get the most out of a conference
- Defining a successful PhD
- Beating burn-out
- Planning a conference talk
- Making 'paper worthy' figures
- How to really get your head around plots in academic papers, and
- Presenting at a conference.



Participating organisations

FLEET is The Australian Research Council Centre of Excellence in Future Low-Energy Electronics Technologies. Read more about our [participating nodes](#) and [partners](#) online.

